

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the instant application:

Listing of Claims:

1. (Currently Amended) A manager for use in a system of grid computing comprising a processor operable to define a computing task based on data received by said processor, said processor further operable to assign a portion of said task to each of a plurality of clients connected to said manager via a network, said processor further operable to approximate a result of said portion [[if]] ~~when~~ said client fails to return said result to said manager, ~~wherein said processor is configured to determine a client failure to return said results based upon at least one condition selected from a group of conditions consisting of: a receipt of a message indicating that the client is no longer connected to the network, a receipt of a message from the client indicating that said result is not forthcoming, and an expiration of a previously defined time delay for said client to provide said result.~~
2. (Currently Amended) The manager of claim 1, wherein said task is one of a plurality of repeatable operations, said task including a plurality of sub-operations, ~~wherein one of said sub-operations is said portion for which said manager approximates the result, and wherein said approximation an approximation~~ of said ~~portion-sub operation~~ introduces a predefined accepted level of error to a performance of said task.
3. (Currently Amended) The manager according to claim [[2,]] 1, wherein in absence of said manager approximating the result, said task would situationally have to be restarted and all of said sub-operations performed by said plurality of clients repeated, ~~wherein said sub-operations can be applied substantially independently of said other sub-operations, wherein said result is a result of a cycle of a multi-cycle computation, wherein an approximation of said result is based at least in part upon at least one previous result for the multi-cycle computation received~~

from said client that failed to return said result or based upon an initial value conveyed to said client that failed to return said result from the manager as part of the assigned task for which the client has failed to return said result.

4. (Currently Amended) The manager according to claim [[3]]_1, wherein said task is an n-body type problem, and wherein a programmatic decision by the manager as to whether to approximate said result when said client fails to return it or whether to re-execute said task to generate said result is made based upon whether a computed degree of error computed for approximating said result exceeds a previously defined threshold for an acceptable degree of error during approximations.

5. (Original) The manager according to claim 4 wherein said n-body type problem is performed using the Barnes-Hut operation.

6. (Currently Amended) A method of grid computing comprising the steps of:
receiving data respective to a computing task; defining said task based on said received data;
assigning a portion of said task to each of a plurality of clients based on said defining step;
awaiting receipt of results of said portions from said clients;
determining at least one client failure to return said results based upon at least one condition selected from a group of conditions consisting of: a receipt of a message indicating that the client is no longer connected to the network, a receipt of a message from the client indicating that said result is not forthcoming, and an expiration of a previously defined time delay for said client to provide said result;

approximating said results for ~~said determined at least one client~~ any clients where said results are not received, wherein an approximation of each result is based at least in part upon at least one previous result received from said client that failed to return said result or based upon

an initial value conveyed to said client that failed to return said result from the manager as part of the assigned task for which the client has failed to return said result;

compiling said received results and said approximated results; and,
outputting said results in a pre-defined format.

7. (Currently Amended) The method of claim 6 comprising the additional step of, prior to said outputting step, of repeating all foregoing steps until a desired level of performance of said task is achieved wherein during said repeating of all foregoing steps, all portions of said task assigned to clients that failed to return said results are assigned to other ones of said clients.

8. (Currently Amended) The method of claim 6 wherein said task is one of a plurality of repeatable operations, said task including a plurality of sub-operations, wherein one of said sub-operations is said portion for which said manager approximates the result, and wherein said approximation ~~an approximation~~ of said ~~portion-sub operation~~ introduces a predefined accepted level of error to a performance of said task

9. (Currently Amended) The method of claim 6 ~~wherein said sub-operations can be applied substantially independently of said other sub-operations, wherein in absence of said~~ manager approximating the result, said task would situationally have to be restarted and all of said sub-operations performed by said plurality of clients repeated.

10. (Original) The method of claim 9 wherein said task is an n-body type problem.

11. (Original) The method of claim 10 wherein said n-body type problem can be performed using the Barnes-Hut operation.

12. (Currently Amended) A system of grid computing comprising:
a manager operable to define a computing task and assign a portion of said task to each of a plurality of clients connected to said manager via a network, said manager further operable to approximate a result of said portion if said client fails to return said result to said manager, wherein said manager is configured to determine a client failure to return said results based upon at least one condition selected from a group of conditions consisting of: a receipt of a message indicating that the client is no longer connected to the network, a receipt of a message from the client indicating that said result is not forthcoming, and an expiration of a previously defined time delay for said client to provide said result, wherein said manager is configured to approximate said result based at least in part upon at least one previous result received from said client that failed to return said result or based upon an initial value conveyed to said client that failed to return said result from the manager as part of the assigned task for which the client has failed to return said result, and wherein said manager is configured to make a programmatic decision as to whether to approximate said result when said client fails to return it or whether to re-execute said task to generate said result based upon whether a computed degree of error computed for approximating said result exceeds a previously defined threshold for an acceptable degree of error during approximations.
13. (Currently Amended) A computer-readable storage medium comprising:
a plurality of computing instructions for a manager connectable to a plurality of clients via a network, said computing instructions for defining a computing task and assigning a portion of said task to each of said clients, said instructions including steps for approximating a result of said portion if said client fails to return said result to said manager, wherein computing instructions are configured to determine a client failure to return said results based upon at least one condition selected from a group of conditions consisting of: a receipt of a message indicating that the client is no longer connected to the network, a receipt of a message from the client indicating that said result is not forthcoming, and an expiration of a previously defined time delay for said client to provide said result, wherein said computing instructions are configured to

approximate said result based at least in part upon at least one previous result received from said client that failed to return said result or based upon an initial value conveyed to said client that failed to return said result from the manager as part of the assigned task for which the client has failed to return said result, and wherein said computing instructions are configured to make a programmatic decision as to whether to approximate said result when said client fails to return it or whether to re-execute said task to generate said result based upon whether a computed degree of error computed for approximating said result exceeds a previously defined threshold for an acceptable degree of error during approximations.

14. (Currently Amended) The computer-readable medium of claim 13, wherein said task is one of a plurality of repeatable operations, said task including a plurality of sub-operations, wherein one of said sub-operations is said portion for which said manager approximates the result, and wherein said approximation ~~an approximation~~ of said ~~portion-sub-operation~~ introduces a predefined accepted level of error to a performance of said task.

15. (Currently Amended) The computer-readable storage medium of claim 14, ~~wherein said sub-operations can be applied substantially independently of said other sub-operations; wherein in absence of said manager approximating the result, said task would situationally have to be restarted and all of said sub-operations performed by said plurality of clients repeated.~~

16. (Currently Amended) The computer-readable storage medium of claim 14, wherein said task is an n-body type problem.

17. (Currently Amended) The computer-readable storage medium of claim 16, wherein said n-body type problem is performed using the Barnes-Hut operation.

18. (Currently Amended) The computer readable storage medium of claim 13, wherein said task is selected from the group consisting of determining a) movements of masses in a given space; b) charges of particles; c) electromagnetic fields; d) fluid dynamics in a fluid system; e) weather patterns; f) equity fluctuations in financial markets; and g) movements of objects in multi-player games.